

**REMARKS**

Claims 58 through 72 were previously pending in this application. Claims 58, 59, 67, and 71 have been amended, and new claims 73-79 have been added. Support for the new and amended claims can be found throughout the specification, for example, at page 28, lines 5-16, page 37, line 6 through page 40, line 22, in the sequence listing, in the claims as originally filed and in the Tables. No new matter enters by way of these amendments. Upon entry of the foregoing amendment, claims 58-79 will be pending.

**1. Continued Examination under 37 CFR § 1.114**

On March 16, 2006, the Board of Appeals and Interferences mailed a decision in the above-referenced matter. Applicants submit herewith a Request for Continued Examination under 37 C.F.R. § 1.114, including amendments to claims 58, 59, 67, and 71.

**2. Claim Rejections – 35 U.S.C. § 103 Rejections**

Claims 58-72 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Rodrigues-Tome, *et al.* (Nucl. Acids Res., Vol. 24, pp. 6-12, 1996) (“Rodriguez-Tome, *et al.*”). Independent claims 58, 59, 67, and 71 have been amended.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The teaching or suggestion to make the claimed

combination must be found in the prior art, and not be based on applicant's disclosure.

*See* M.P.E.P. §§2143.01 and 2143.03.

In a proper obviousness determination, the changes from the prior art must be evaluated in terms of the whole invention, including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the claimed invention. *See In re Chu*, 36 U.S.P.Q.2d 1089, 1094 (Fed. Cir. 1995). This includes what could be characterized as simple changes. *See, e.g., In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) (Although a prior art device could have been turned upside down, that did not make the modification obvious unless the prior art fairly suggested the desirability of turning the device upside down).

All claim limitations must be considered when determining patentability. *See, In re Gulack*, 703 F.2d 1381, 1385, 217 U.S.P.Q. 401 (Fed. Cir. 1983). "Differences between an invention and the prior art cited against it cannot be ignored merely because those differences reside in the content of the printed matter." *Id.* at 1385. The Federal Circuit has held that "printed matter cases have no factual relevance where the invention as defined by the claims requires that the information be processed not by the mind but by a machine, the computer." *In re Lowry*, 32 F.3d 1579, 1583, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (finding that the Board erroneously extended a printed matter rejection under sections 102 and 103 to a new field involving information stored in a memory) (internal quotes omitted).

Only when the prior art teaches or suggests the claimed invention does the burden fall on the applicant to rebut that *prima facie* case. *See In re Dillon*, 16 U.S.P.Q.2d 1897, 1901 (Fed. Cir. 1990) (in banc), *cert. denied*, 500 U.S. 904 (1991).

The Rodriguez-Tome reference does not teach or suggest the claimed methods. Whatever else Rodriguez-Tome discloses, it does not disclose or suggest identifying or ranking a target nucleic acid sequence based on comparison to SEQ ID NO: 16207 through SEQ ID NO: 27905. As such, Rodriguez Tome does not teach or suggest the claimed methods.

The sequences stored on a computer readable medium, when read in light of the claims as a whole, exhibit the requisite functional relationship and accordingly should be considered in determining patentability. The amended claims are directed to methods of identifying, detecting or ranking a nucleotide sequence comprising, *inter alia*, comparing a target sequence to a sequence stored in computer readable medium having recorded thereon at least 100 nucleotide sequences including sequences selected from the group consisting of SEQ ID NO: 16207 through SEQ ID NO: 27905 and complements thereof, where the identification, detection, or ranking of the target sequence is based on a comparison with at least one of the sequences SEQ ID NO: 16207 through SEQ ID NO: 27905. The sequences stored on computer readable medium are utilized in the act of comparing and thus greatly facilitate the identification, detection or ranking of nucleotide sequences within the sequences stored on computer readable medium. As such, they cannot be ignored as non-functional, descriptive material in the obviousness determination.

The claimed methods comprising, *inter alia*, comparing target sequences to a sequence stored on a computer readable medium relies on a computer readable medium having recorded on it at least 100 nucleotide sequences including sequences selected from the group consisting of SEQ ID NO: 16207 through SEQ ID NO: 27905 and

complements thereof. The claimed methods would not achieve their purposes (identification, detection or ranking) without the sequences recorded on a computer readable medium. As previously argued, the claimed methods allow for the easy identification of nucleotide sequences selected from the group consisting of SEQ ID NO: 16207 through SEQ ID NO: 27905 and complements thereof.

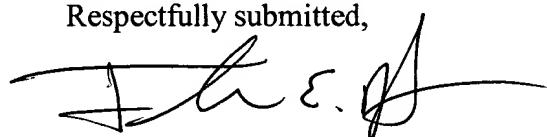
As such, the sequences are functionally related to the computer readable medium and therefore must be considered for the obviousness determination.

In sum, the cited reference does not teach or suggest the claimed methods. No suggestion to modify the cited reference has been found in the cited reference or pointed out to Applicants from the general knowledge of one of ordinary skill in the art. For at least these reasons, the Applicants respectfully submit that the Examiner's rejection based on obviousness, under 35 U.S.C. § 103, does not apply to the amended. As such, Applicants request reconsideration and withdrawal of the rejection of claims 58-72 under 35 U.S.C. § 103.

## Conclusion

In view of the foregoing remarks, Applicants respectfully submit that the present application is now in condition for allowance, and notice of such is respectfully requested. The Examiner is encouraged to contact the undersigned should any additional information be necessary for allowance.

Respectfully submitted,



Filed: May 16, 2006

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